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SDI AND STRATEGY

By

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19 ABSTRACT (Continue on reverse if necessary and identify by block number) This report examines the political environment in which the Strategic Defense Initiative (SDI) must compete with other military programs for sustained attention and funding. Specifically, the report argues for increased funding and for moving the SDI from the research phase to the deployment phase. Due to the rapid changes in the international environment and the perceived end to the cold war, the rationale behind the SDI must be updated and expanded or else the program will become increasingly irrelevant. The report examines the SDI in terms of: (1) the strategic benefits of near-term limited deployments, (2) the political and economic forces arrayed against SDI, and (3) political strategies to advance the nar-term deployment option.				
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SDI AND STRATEGY

'It was the best of times and it was the worst of times' is an apt description of the state of United States policy on ballistic missile defenses in the 1980s. President Reagan's 'Star Wars' speech of 23 March 1983 was the focus of much of the strategic debate for this decade both in the United States and around the world. The speech certainly renewed interest in the topic of strategic defenses but it is also clear that the United States may now be as far away as ever from actually deploying effective strategic defenses. In his speech, Reagan offered a sweeping long-term vision of a world transformed from reliance on offensive retaliatory punishment for deterrence to a world where Americans and our allies "could live secure in the knowledge that their security did not rest upon the threat of instant U.S. retaliation to deter a Soviet attack, that we could intercept and destroy strategic ballistic missiles before they reached our own soil or that of our allies."¹ In order to bring this vision to fruition, Reagan called upon the American scientific community to create the technology to make nuclear weapons "impotent and obsolete."² Reagan's announcement of his sweeping strategic vision was the seminal strategic event of the decade not only because it reopened the debate on the utility of strategic defenses among the national security community but also, and perhaps more importantly, his vision sparked the imagination of the American public and literally changed the shape of the domestic political playing field for strategic issues almost overnight. With his long-term vision, Reagan at least temporarily largely defused both those in the national security

community who were critical of his nuclear strategy and strategic modernization programs and also those elements of the public who saw him as a nuclear warmonger and who called for a nuclear freeze as the best first step to ending the nuclear arms 'race'.

The Strategic Defense Initiative (SDI) was the research program created to investigate the prospects of strategic defenses in accordance with President Reagan's vision and the Strategic Defense Initiative Organization (SDIO) was the agency created within the Department of Defense (DoD) to manage the program. As with many other programs during Reagan's tenure, his SDI was ambiguous enough to appear to be many things to many people and thereby provide great initial political utility while leaving many of the difficult and inevitable political and financial bills to be paid in the future. In responding to the president's vision, SDI was at first primarily concerned with developing exotic and highly competent systems which could be capable of rendering ballistic missiles impotent and obsolete. More recently, the program has focused more heavily on less capable but more mature systems perhaps in an attempt to capitalize on the fleeting remaining years of Reagan's second term by presenting early deployment options. In the event, Reagan did not push for early deployment of strategic defense systems and remained true to the spirit of his 1983 speech which noted that investigation of the feasibility of strategic defenses would require a long term research program and that any decisions on deployment would have to be made by future presidents and future congresses. The SDI program has also failed to provide

any authoritative guidance for our strategic roadmap for moving from our current situation to a defense dominated world. Moreover, SDI has evolved against a complex and changing international milieu where perceptions of its utility vis a vis the Soviet threat or as a bargaining chip in arms negotiations have waxed and waned. Thus, it is hardly surprising that both the ultimate purpose and the shorter term goals of the SDI program are less than clear to both supporters and critics of the program. It is also equally clear that Reagan's 1983 vision was essential to creating the program but cannot now guide the current direction of the program. Moreover, the inevitable political and financial costs of the program are becoming increasingly apparent and will be more and more difficult to sustain based solely on Reagan's long-term strategic vision of 1983.

The bills on SDI are now coming due. Unless the program can be restructured to provide visible positive feedback on shorter term goals, then it is probably doomed to irrelevancy in terms of providing near-term defense deployments and will probably revert to the lower funding levels and the lesser attention which strategic defense research efforts received before our disparate strategic defense related programs were coalesced into the SDI rubric. This report will argue that if SDI does not lead to near-term deployment it would be a great tragedy not only because deployed strategic defenses offer the U.S. opportunities for strengthened deterrence, improved stability, improved negotiating leverage, and improved superpower relations but also because the demise of SDI would represent a dangerous failure of political

will and is probably avoidable if SDI can be packaged and sold to the American public properly. The American public is at best only marginally interested in strategic issues, has a notoriously short attention-span, and is far more receptive to strategic developments perceived to be positive: SDI must be packaged and sold in light of these political realities. Because the forces opposing SDI leading to near-term deployments are powerful, the orientation and the packaging of the program must be changed soon or it is likely that we will see a repeat of the 1960s strategic defense debate wherein the political impetus for deployments will erode as the technical capabilities of the system increase. This report will examine the political prospects for turning SDI from a research program into a deployment program in the near-term through an analysis of SDI in three areas: 1) a review of the strategic benefits of deploying a near-term, limited defense system, 2) an overview of the political and financial forces arrayed against near-term deployment, and 3) some specific potential strategies which might advance the near-term deployment option.

Before turning to our analysis of the political prospects for the SDI program leading to near-term strategic defense deployments we must first examine some fundamental questions related to the whole concept of Ballistic Missile Defenses (BMD). In evaluating BMD in general most lines of inquiry revolve around three interrelated broad question areas: 1) will it work?, 2) how much will it cost?, and 3) will it make nuclear war more or less likely? This report will focus on question number three by

arguing that questions number one and two can only be answered within a strategic/political context and only question number three fully opens this strategic/political context. In other words, the desirability of strategic defenses is primarily a strategic/political question rather than a technical or fiscal problem. How one approaches the strategic/political question will largely determine how one answers the other questions regarding strategic defenses.

Question number one revolves around technology and can involve arcane discussions of problems involved with the cutting edge of science in many areas such as physics, mechanics, engineering, and computer software and technology. These discussions in turn generally devolve into debates between rival factions of 'experts'. This approach generates a great deal more heat than light; because the technical merits of these debates almost always exceed the technical understanding of the audience, the public is left to accept or reject the arguments of the big name experts on the opposing sides as articles of faith. Moreover, since most of these big name experts have already made up their minds concerning the feasibility or desirability of strategic defenses (most were heavily involved in the BMD debate of the 60s) their arguments do not necessarily relate to the technical merits of the issue at hand but rather reflect their predetermined strategic preferences couched in technical language. Ultimately, the entire question of the technical feasibility of strategic defenses relates more to judgements about the strategic utility of certain hypothesized warhead leakage rates than to the technical problems involved with

strategic defense per se. Almost no one will argue that strategic defenses can be built that have extremely low or zero leakage rates and likewise almost no one will argue that we do not now have the technology to destroy or disable some percentage of attacking boosters and warheads plus decoys. Thus, the question of whether a strategic defense system will work or not becomes at what maximum level of leakage do strategic defenses become strategically significant and how much technological innovation and financial commitment is required to reach this point. This is a strategic/political question and while technology can offer direction and guidance, technology by itself cannot answer the question.

Likewise, financial questions about the costs of deploying strategic defense systems must take place within the context of the strategic utility and political trade-offs required to field the system in question or this debate will end up being similarly sterile. The public has been subjected to an extremely wide range of cost estimates for the deployment of strategic defenses. Estimates ranging from as much as a Trillion dollars or more down to as little as ten to twenty-five Billion dollars for completely deployed systems have been widely circulated.³ These estimates reflect different deployment options, modes and architectures in reaching their vastly differing estimates for the cost of a fully deployed system. More importantly, however, these divergent estimates are driven by fundamental disagreements on the strategic/political question of how much leakage the system can allow in order to have strategic utility. Those who believe

strategic defenses have little strategic/political utility unless they have extremely low or zero leakage rates present cost estimates for extremely robust, redundant, and complex systems requiring birth to death tracking of many thousands of objects and capable of reaching such levels of near perfection. Those who believe that strategic defenses have strategic/political utility at far lower levels of effectiveness present cost estimates which reflect less complete and complex systems. Thus, examining raw cost comparisons in a strategic/political vacuum is nearly useless. Of course, any decision to deploy strategic defenses will also be subjected to the normal intensely political process by which all military systems are funded by our government. In this context, judgements about appropriate funding levels for strategic defense deployment must be made in the context of trade-offs between other defense procurements and will be a primarily political decision.

Having examined why focus on questions one or two in isolation cannot really help us to decide whether the U.S. should proceed with deployment of strategic defenses, we must now turn to the central issue: an examination of the interrelationship between strategic defenses and U.S. nuclear strategy. As deterrence of nuclear war is the primary goal of U.S. nuclear strategy, it seems appropriate to ask question number three in the form given above but the interrelationship between strategic defenses and strategy is clearly more subtle and all-encompassing than can be captured by the relatively simple question of whether strategic defenses increase or decrease the likelihood of nuclear war. The difficulty in posing a simple question which adequately

describes the interrelationship between our nuclear strategy and strategic defenses illustrates the complexities involved in any discussion of strategy. Indeed, perhaps one of the reasons why questions number one and two above seem to receive more attention and discussion is that these questions can be rather well bounded and are suitable for empirical testing whereas any discussion of strategy does not lend itself to empirical testing, is less well bounded and generally more esoteric in nature. Nonetheless, we must focus on the interrelationship between our nuclear strategy and strategic defenses because this is an essential intellectual underpinning for any analysis of technology or costs as discussed above.

Another intellectual barrier to analysis of the interrelationship between strategic defenses and U.S. nuclear strategy is the lack of precision surrounding the concept of deterrence. There is a wide and probably irreconcilable schism between those who believe that the fundamental reality of the nuclear age dictates that deterrence is best maintained through the threat of societal punishment and those who believe that the evolving dynamics of both offensive and defensive weapons technology dictate that deterrence is best maintained by the ability to deny the war objectives of the enemy. This fundamental schism largely determines how those in each school of thought view the utility of strategic defenses. Those in the deterrence by punishment or Mutual Assured Destruction (MAD) school would logically see great utility only in strategic defenses which offered a very high level of societal protection

and even then this would not be their preferred policy choice because the logic of MAD dictates that it would be better to leave both sides virtually defenseless and thereby reduce the need for large numbers of offensive forces. Those in the deterrence by denial school would logically see utility in strategic defenses of lesser capability so long as these defenses could help to deny enemy war objectives. A related problem concerning deterrence and strategic defenses is captured by the popular admonition that 'if it ain't broke, don't fix it'. In relation to strategic defenses, this would imply that since offensive only nuclear deterrence has worked for 44 years so far it would be foolish to disrupt the stable basis on which that deterrence rests with the introduction of something as radical as strategic defenses. While superficially appealing, this line of reasoning has several flaws: First, one can never determine why deterrence is operative, only detect when it has failed. Second, this line of reasoning would seem to view the strategic balance as static rather than dynamic and would deny the impact of technological change on strategy and credibility when technology has obviously played a crucial role in shaping our strategy in the past and history is replete with examples of offensive-defensive interaction. Finally, closing the door on strategic defense options keeps the ultimate basis for deterrence resting on the threat of massive societal punishment based on a political judgement -- a basis which would seem to be unacceptable over the long-term, especially if other options might be available.

Strategic Benefits of Near-Term Limited Strategic Defenses

A complete analysis of all of the strategic benefits of a near-term deployment of strategic defenses is beyond the scope of this paper. However, the most important rationales must be presented here since they form the underpinning for the political strategies detailed below. Perhaps the most obvious rationale for the United States to move toward near-term strategic defense deployments is that such defenses are a necessary and logical adjunct to our current nuclear strategy. Despite the fact that the MAD concept dominates much of the public (and also to a lesser degree official) thinking on the subject of nuclear deterrence and also provides the basis for the 1972 SALT I Interim Agreement and ABM Treaty, MAD has not provided the intellectual basis for U.S. nuclear strategy as it has evolved since SALT I. While still seemingly useful as a declaratory policy or as a tool to measure 'how much is enough?', MAD had never been useful as a guide to force employment and the credibility problems with MAD as a basis for our nuclear strategy began to surface immediately following SALT I.⁴ The 1974 Schelsinger Doctrine represents the earliest official repudiation of MAD since it emphasized the development of Limited Nuclear Options (LNOs) to enhance deterrence across the spectrum and provide our National Command Authority (NCA) with preplanned options for nuclear use below the level of societal punishment implied by MAD. During the remainder of the 1970s, U.S. nuclear strategy continued to move further away from MAD as Multiple Independently-Targetable Reentry Vehicle (MIRV) technology and

accuracy continued to improve and MAD was seen as a less and less credible basis for nuclear deterrence.

The movement of U.S. nuclear strategy away from MAD reached technical and force structure limitations with the promulgation of Presidential Directive (PD) 59 by President Carter in 1980. This secret product of Carter's National Security Council apparatus reportedly moved the U.S. nuclear targeting policy to a heavy emphasis on countermilitary and countercontrol targets and as such was a complete reversal of the targeting priorities implied by a MAD philosophy. Indeed, the demanding scope of the target base outlined by PD 59 was apparently beyond the reach of U.S. weapons and intelligence capabilities and President Reagan therefore reportedly adopted a similar but less stringent set of targeting priorities in his National Security Decision Directive (NSDD)-13 of 1981. Given the actual development of U.S. nuclear doctrine, it is somewhat ironic that President Carter was popularly perceived as a wimp and President Reagan was seen as a trigger-happy cowboy. It is abundantly clear that by the early 1980s MAD no longer served to guide U.S. nuclear strategy -- instead our strategy had reverted to a more traditional war-fighting and denial approach to deterrence.

The evolution of U.S. nuclear strategy away from MAD is significant in that it highlights the need for strategic defenses. Deterrence based on the ability to credibly conduct militarily significant nuclear war operations and deny the enemy his wartime objectives cannot be complete without some form of defense. Even limited and low levels of strategic defenses can be significant in disrupting the timing and military objectives

of an enemy strike and, of course, these military benefits become more significant as the defenses become more robust and acquire the capability to defend high value targets preferentially. Just as the logic behind MAD dictates very low levels or no strategic defenses, the logic of deterrence by denial dictates that strategic defenses are a necessary adjunct to the ability to credibly conduct militarily significant nuclear war operations. While the evolution of U.S. nuclear strategy has not been without debate, it is significant that both Democratic and Republican administrations have strongly adopted the shift to deterrence by denial and the burden of proof should rest upon those who do not agree with this shift in emphasis to explain why administrations as disparate as those of Carter and Reagan would have both strongly endorsed this reorientation in U.S. nuclear strategy. Given the context of the evolution of U.S. nuclear doctrine, it is clear that Reagan's 1983 'star wars' speech was more of an evolutionary adjunct to our evolving strategy than the 'bolt from the blue' which it is often characterized to be.⁵

An interrelated concept which also points to the logical need for strategic defenses relates to the continuing improvements in Command, Control, Communications and Intelligence (C3I) capabilities and in ballistic missile accuracies by both superpowers. Indeed, the entire evolution of U.S. nuclear strategy in the postwar period can be thought of as a continuous intricate dance between strategy and technology with the constant objective of credibility. Credible strategies must reflect the military capabilities of our evolving technology. Just as the

inaccurate single warhead ballistic missiles of the 1960s dovetailed well into the concept of MAD, the advent of MIRVs and the evolutionary improvements in ballistic missile accuracy and C3I made any strategy based on MAD both less credible and also facilitated the movement towards a nuclear strategy based on deterrence by denial. These trends towards greater accuracies and better C3I continue today and this evolution highlights the need for strategic defenses. As terminal guidance and/or navigational updates via the U.S. Global Positioning System (GPS) or the Soviet GLONASS system will greatly enhance the accuracy of ballistic missile warheads, both superpowers also continue to make significant improvements to their C3I networks. Thus, we are rapidly approaching the time when both superpowers will be able to conduct intercontinental strikes with near zero Circular Error Probable (CEP) and realtime C3I networks to facilitate 'shoot-look-shoot' targeting strategies. Indeed, with these type of accuracies and C3I networks, the superpowers may also soon move towards non-nuclear strategic weapons and these type of weapons could strain deterrence in the absence of any defenses since there would seemingly be fewer disincentives for their use when compared with nuclear weapons.

The cumulative impact of these evolutionary technological improvements means that any fixed and locatable target which is not superhardened is today very vulnerable and will only become more vulnerable as the technology improves. These technological improvements have an obvious negative impact on both crisis and strategic stability. When the probability of kill for any fixed

target which is not superhardened becomes essentially the reliability of the missile, both superpowers have increased incentives to strike first or to overreact in crisis situations. Introduction of even very limited and incomplete strategic defenses change these calculations significantly because of their capability to disrupt at least the timing of a comprehensive first strike. Moreover, only strategic defenses offer the potential to make stabilizing contributions across the board in this area -- introduction of the mobile small ICBM or superhardening of crucial C3I links would both be important and would both make stabilizing contributions but could not provide the synergistic effect which strategic defenses give to all systems. Of course, the stabilizing contributions of strategic defenses in this area become more pronounced as the defenses become more robust and preferential boost-phase intercepts are added to the defensive architecture.

Many critics of SDI attack the program on the basis of their perceptions of SDI's impact on US-USSR arms control negotiations. The basic thrust of these type of arguments is generally that the U.S. cannot have its cake and eat it too -- we must either choose SDI or strategic arms control. These arguments are certainly buttressed by the virulent attacks on SDI often made by the Soviets and their traditional continuing theme that SDI is the primary stumbling block to a comprehensive START agreement which encompasses a 50% reduction in certain categories of offensive weapons. In this context, the recent Soviet offer to formally end their insistence on explicit linkage between SDI and START made by Foreign Minister Shevardnadze to Secretary of State Baker

at Jackson Hole, Wyoming largely defuses this line of argumentation.⁶ Moreover, this Soviet retreat from their initial negotiating position is reminiscent of their negotiating strategy in relation to the INF talks where they eventually backed away from several strategic defense related preconditions (as well as agreeing to resume the talks following their walkout) in order to reach the INF Treaty. Now that the Soviet precondition of an explicit linkage between SDI and START has been removed, we can examine the interrelationship between START and SDI on the basis of our overall nuclear strategy and not primarily on the basis of a more narrow arms control focus. Highlighting certain features of current US-USSR strategic arms control efforts can show both that our current START efforts will not necessarily lead to a more stable strategic environment and also that strategic defenses and arms control are not necessarily inherently mutually exclusive (as they are too often portrayed to be) and that in many situations strategic defenses can actually enhance efforts towards significant arms control.

Contrary to popular perceptions, past US-USSR strategic arms control has not necessarily lead to greater strategic stability, actual reductions in numbers of weapons, or even improved US-USSR political relations. Today, given the attitude of the current leadership of the USSR and the generally good relations which presently prevail between the US and the USSR it is reasonable to hope that the ongoing START negotiations can produce some true progress towards arms reductions and improved US-USSR relations. Yet, the ironic twist to these negotiations lies in the

relationship between strategic stability and arms reductions: with the present and foreseeable force structure of the U.S., arms reductions of the type envisioned by START actually serve to decrease strategic stability. The reasons for this inverse relationship between numbers of strategic weapons and strategic stability lies both in the structure of earlier US-USSR arms control regimes and in the evolving nature of strategic technology detailed above.

To a certain degree, our current and foreseeable strategic force structure is a vestige of US-USSR arms control of the SALT era because it reflects our past emphasis on MAD in nuclear strategy and also the counting rules of the SALT era. Clearly, the current U.S. strategic force structure with its heavy emphasis on Submarine Launched Ballistic Missiles (SLBMs) was not designed to optimize our nuclear warfighting capability. A major goal of the U.S. in the SALT I negotiations was to 'move the Soviets out to sea' by attempting to increase the utility of SLBMs within the context of the Interim Agreement and under the overarching MAD construct.⁷ SLBMs are ideal MAD weapons -- they are assumed to be invulnerable to preemption and also too inaccurate to be used for counterforce targeting. While difficult to quantify, MAD thinking certainly contributed to and continues to influence the U.S. emphasis on SLBMs. The advent of the D-5 SLBM will supposedly correct the lack of counterforce potential of current U.S. SLBMs. MAD and SALT notwithstanding, the Soviets have generally maintained their heavy emphasis on ICBMs (60% of their current strategic warheads are on ICBMs) and START does nothing to reduce this potentially threatening

asymmetry in prompt hard target kill capability and throwweight. Thus, the U.S. enters the START regime with a force structure which largely reflects our MAD orientation and without negotiating leverage or incentives for the Soviets to reduce their heavy reliance on counterforce capable ICBMs.

A more serious problem with the current and foreseeable U.S. force structure relates to the mismatch between SALT and START counting rules and the degree to which our current force structure was designed with an eye to SALT era counting rules. In this context, the problem is that we have designed a force structure with a limited number of launch platforms and heavily MIRVed missiles since under SALT the counting rules limited launchers. Now, under START, the counting rules more properly deal with warheads but our force structure matches far better with the old counting rules than with the new counting rules. Quite simply, given our current and projected strategic force structure, the U.S. will have too many eggs in too few baskets and this problem will only be exacerbated with the START proposed 50% cut in warheads. Thus, under START, the U.S. will find herself in a position where a combination of a reduced number of aimpoints and the technological advances in technology discussed above could combine to make the strategic balance more precarious since each side will possess more capable warheads and the leverage gained by initiating a strike will increase. To some degree, the Soviets have already mitigated this problem by making their SS-24 and SS-25 ICBMs mobile. It remains to be seen how far the U.S. will be able to advance the mobility option for our

ICBMs especially in light of the internecine warfare required to field any of our MX ICBMs.

Another major arms control related point made by those who oppose deploying strategic defenses deals with the action-reaction model concerning the interrelationship between strategic defenses and offensive force levels. Much of the logic underpinning the stability assumed to be inherent in MAD and SALT I derived from the posited interrelationship between these two factors. Simply put, this interrelationship logically posits that there is a direct link between defensive capabilities and required offensive force levels; the more capable the defenses, the more the offensive forces must be increased to overcome these defenses. Of course, as actually formulated in the ABM Treaty and the Interim Agreement, this interrelationship would logically imply that neither side had any incentive to increase their offensive force levels since the superpowers had codified a 'plateau of stability' where both sides were assumed to have sufficient forces to inflict assured destruction on the other side and defenses were frozen at essentially a zero level. Unfortunately, the evolution of the nuclear force structures and doctrines of the superpowers towards greater numbers of more capable warheads and warfighting doctrines since SALT I dramatically illustrates the fact that many factors are at work in shaping the nuclear balance between the superpowers and stability is a very difficult condition to achieve. Given the actual development of the strategic balance following SALT I, the burden of proof should rest upon those who argue that stability and low levels of offensive forces will flow more or less

automatically from low levels of strategic defenses.

Instead of evaluating strategic defenses from a MAD perspective in which their deleterious effects upon strategic stability and arms control are accepted as articles of faith since they flow logically from conditions assumed to be inherent in a MAD world, we must instead evaluate the potential for contributions to stability and arms control which strategic defenses could make based on the actual evolution of the superpower balance. In this context, strategic defenses could make significant contributions to comprehensive superpower arms control regimes in three interrelated ways: First, effective strategic defenses would reduce the military utility of ballistic missiles and would thereby increase the incentives to make substantial cuts in these forces. So long as ballistic missile warheads are given essentially a free ride to their targets, neither superpower has a great incentive to radically reduce the numbers of these warheads since these reductions relate more to political posturing than to any strategic rationale. Second, reducing the strategic utility of ballistic missiles would serve to move the superpowers towards more stable and less threatening types of weapons systems which would not offer the capability for prompt hard target kill. Finally, effective strategic defenses could serve as a type of insurance policy against cheating by either side. Negotiating extremely low ballistic missile levels which otherwise might be attractive to both sides could be very difficult in the absence of effective strategic defenses since extremely low force levels present more serious problems related

to potential cheating. For example, the relative effect of 100 clandestine ballistic missiles under a negotiated ceiling of 500 warheads is obviously far greater than under the current and projected far higher ceilings and, unfortunately, our ability to monitor and verify with high confidence would seem to be bounded by technology and inspection regimes but would be independent of and inversely related to the negotiated force levels.

A final point where the interrelationship between strategic defenses and arms control could be critical involves the process of transition from total reliance on offensive only retaliation for deterrence to a more balanced offense-defense balance and finally towards defense dominance. Without U.S.-Soviet negotiations to help manage this transition by making it more predictable and stable, the process of transition presents great potential for instability. The greatest potential for instability would lie in a unilateral deployment of effective strategic defenses by either superpower and preventing this is, of course, the primary intent of the ABM Treaty. Thus, a restructured ABM Treaty regime can and should serve as a principal focus for the defensive transition of the superpowers; through renegotiation or modification it could serve as a measuring and limiting tool as the two sides move to bilaterally and relatively equally increase their levels of strategic defenses. Additionally, use of the ABM Treaty regime to manage the defense transition could help to avoid the problem of unilateral deployment of partially effective defenses (good enough to effectively thwart a ragged retaliation but not good enough to effectively deal with a first strike) by both managing

the bilateral defensive deployments and the numbers and capabilities of the offensive forces. Overall, the recent Soviet decision to no longer hold START hostage to restrictions on SDI portends that the U.S. and Soviet Union may be able to achieve a truly cooperative transition to strategic defenses and that arms control can play an essential role in helping to make this transition more stable and predictable.

Other features of the international environment indicate that the U.S. should think very seriously about moving to deploy limited strategic defenses in the near term even if we are not able to establish a cooperative transition regime with the Soviets. The changes begun by Gorbachev have created enormous instabilities throughout the Communist world. While most of these changes appear to be heading in a direction which would ultimately benefit both the U.S. and those countries now Communist, Gorbachev has also unleashed tremendous pent up forces which will be very difficult to control. No one should feel sanguine about predicting where the U.S.S.R. will find herself in the next five years. One only need look to the events in Tienanmen Square to recognize that the changes initiated by Gorbachev need not have a happy outcome for either the Soviets or the U.S. Instability and rapid change can undermine the rationality required for deterrence to operate. To present a possible worst case scenario: consider the possibility that the Soviet Union could devolve into a number of warring republics many of which would possess significant nuclear capability. How much nuclear restraint and forbearance would the warlords ruling

these republics demonstrate if their survival were threatened and where would they target their nuclear warheads?

The instabilities in the current international system also serve to illustrate the fragile basis of worldwide deterrence. The same technological improvements which have increased the effectiveness of the arsenals of the superpowers have also introduced new and less costly yet more potent technologies to many other countries around the world. Many countries now possess or will soon acquire the capability to build ballistic missiles and the spread of this technology is proving extremely difficult to counter. The 'war of the cities' during the Iran-Iraq War is a gristly illustration of the potential uses of this new technology recently acquired by the developing world. As more and more countries acquire these capabilities, worldwide deterrence becomes increasingly complex and the probability of the use of some of these weapons increases (due to increased chances for accidents if nothing else). Maintaining bilateral deterrence between the U.S. and the Soviet Union is difficult enough but that task looks easy compared to attempting to deter an extremely wide variety of threats from extremely divergent groups. In this environment, the development of a limited near-term strategic defense system by the U.S. could prove extremely beneficial. We may soon no longer enjoy the luxury of maintaining deterrence based on what we consider rationality and would be far better served by defenses than by retaliation. Of course, many will argue that building strategic defenses against this type of emerging threat is itself irrational since the chances of this threat being realized via ballistic missiles is remote and many

threat being realized via ballistic missiles is remote and many other delivery methods or threats would be cheaper and more credible. Nonetheless, if the U.S. does move to deploy limited strategic defenses in the near-term it could serve to devalue the potential benefits of ballistic missile development by emerging countries. More importantly, U.S. development of strategic defenses could help bolster American resolve in an increasingly dangerous world -- a world where Americans have recently shown a great tendency to panic in reaction to even minor potential threats. How would a country which strongly overreacts to the discovery of a couple of poisoned Tylenol capsules, apples, or grapes respond to a Qaddafi brandishing a few ballistic missiles with nuclear, chemical or biological warheads? Clearly, strategic defenses can have great potential benefits for the U.S. both within and outside the context of bilateral U.S.-Soviet Relations.

Political and Economic Forces Arrayed Against SDI

Despite the potential for very significant contributions from a near-term limited strategic defense system as discussed above, our current SDI efforts appear to be running out of steam. A wide range of individuals, organizations, and factors are converging on SDI and cumulatively they spell real trouble for the continuation of a large scale research program let alone any type of near-term deployment. Identifying and gaining a rudimentary understanding of these factors converging on SDI is essential to exploring viable strategies for selling SDI as will be discussed below.

From the domestic politics perspective, perhaps the most readily identifiable factor working against SDI is the change in administrations from Reagan to Bush. SDI was very clearly Ronald Reagan's baby (it was often characterized as the President's SDI) and he was quite willing to be the heavy on more than one occasion in order to keep the program energized and avoid the perception that it was a bargaining chip.⁸ Reagan's strong support for SDI research helped to initially keep the program independent from the budgetary battles within the Pentagon and to encourage support from Congress. President Bush's level of commitment to the program is far less clear and moreover he is generally less decisive in his leadership style. While Bush and especially Vice President Dan Quayle have made several policy statements generally supportive of SDI, strategic defenses do not appear to be a top priority of this administration.⁹ Perhaps the best way to illustrate the differences between the Reagan and the Bush approaches is to recognize that Reagan was ideologically committed to SDI while Bush is more pragmatic in general and seems to support strategic defenses on this basis. Bush's pragmatic support for SDI may be quite strong but it is still not the same as Reagan's ideological commitment and will probably prove to be insufficient to provide focus and discipline for the executive branch bureaucracy involved with SDI or to be very persuasive to members of Congress. Strong, consistent, and visible presidential support is critical to the viability of almost any large scale undertaking of our government; the SDI will flounder without this type of presidential support, and, currently, President Bush is not providing the actual or

perceived type of leadership in relation to SDI which could advance strategic defense deployment options.

Another critical change in personnel also took place in January 1989. Lieutenant General James Abrahamson stepped down as head of the Strategic Defense Initiative Organization (SDIO) and was replaced by Lieutenant General George Monahan. Both Generals are from the Air Force and represent the determined effort of the Air Force to maintain military control of and provide direction for the SDI. However, despite being from the same service, Abrahamson and Monahan bring very different perspectives and styles to bear on the issue of strategic defenses. Abrahamson was very energetic, positive and sales-oriented in his approach to SDI in his appearances before Congress and the public. Monahan is far more low-key and focused on management rather than sales. Moreover, Abrahamson and Monahan also serve to illustrate important perceptions towards SDI held within powerful quarters of the military: despite the fact that he came to SDIO from a string of successful assignments and was perceived to be on the rise within the Air Force, Abrahamson left SDIO after his five year stint without his fourth star; conversely, Monahan was sent to SDIO with just a little more than one year to go before he reaches mandatory retirement after 35 years of service. The bottom line message is quite clear -- the top military leadership did not agree with Abrahamson in his strong support for SDI and now see SDIO as a final posting before a general is sent out to pasture. Both of these developments bode ill for SDIO and illustrate a fundamental

lack of support or at best lukewarm support for SDI within the military.

Those who do not follow the SDI closely generally assume that it is just another one of those overpriced and unnecessary programs foisted upon the unsuspecting American public by the Pentagon. In the case of SDI this conventional wisdom is fundamentally wrong. SDI did not originate in the Pentagon and neither the civilian leadership nor the services are very comfortable with the idea of strategic defenses in general and are extremely uncomfortable with the prospects of funding any significant strategic defense deployment. This is not to say, however, that the SDI enjoys no support within the Pentagon. SDI represents a significant infusion of money and all organizations welcome increased funding, especially for basic research and development.

In order to understand the Pentagon's position, one must distinguish between the SDI and actual programs designed to deploy strategic defenses in the near-term. In this context, the rationale behind the Pentagon's support for SDI as a source of funding but general opposition to programs designed to actually deploy strategic defenses in the near-term (which at first seems to be contrary to the 'logical' position of the Department of Defense) become clearer when one examines the roles, missions, and identities of the services. The lack of institutional support for deployed strategic defenses from the services flows directly from the fact that strategic defense is not and has not been a primary role or mission for any service nor is the idea of providing strategic defenses a fundamental element of the

identity of any of the services. Thus, while the SDI might be a useful source of funding and could produce spin-offs in other weapon areas, none of the services have any institutional incentives to take the lead in pushing for deployment of strategic defenses. Not only are there no institutional incentives for the services to push for deployment of strategic defenses but currently, given the DoD's attempts to fund the remnant of Reagan's strategic modernization program with a shrinking budget, there are strong incentives for each service to protect their own core budget at the expense of everything else. Indeed, within the current budgetary environment, the services have sought to use SDI as an additional source of funding for programs they wanted independent of SDI and thus save their own budgets for programs essential to their core identity. A final institutional disincentive towards any service actually pushing for near-term deployment of strategic defenses relates directly to the carefully brokered positions of the services concerning their roles and missions and the relationship of these roles and missions to significant arms control limitations. In sum, the services would rather keep the organizational peace within the DoD rather than entering into the type of internecine warfare necessary to establish strategic defenses as a core role and mission of one of the services (or of a new service) or to dismantle service positions built upon on the ABM Treaty regime. Thus, from a bureaucratic perspective, it is very clear that there is little support for SDI within the military and certainly not the type of support which would push strongly for early

deployment options.

Another major interrelated problem area facing SDI concerns Congress and the current severe constraints on the federal budget. The lack of any real institutional support for SDI within the DoD (except as a source of funding for basic research or programs which the services wanted anyway) is exacerbated by the fact that right now Congress would be unlikely to generously fund a new large scale program even if the DoD were strongly supportive. Moreover, the level of support for SDI within the Congress is eroding for a variety of reasons including: a perception of weakening public support for strategic defenses, perceptions of greatly improved U.S.- Soviet relations, new and unrelated items moving to the top of the policy agenda (e.g. Eastern Europe, education, and the war on drugs), and a general lack of national level or constituent oriented direct benefits from the billions already spent on SDI. The cumulative impact of these factors will make it very difficult for the Congress to adequately fund and support SDI as the program is currently structured. Indeed, the very slight cut in SDI's budget for FY 1990 is remarkable under these circumstances.¹⁰

Public perceptions of strategic defenses in general and of the specific progress of SDI form another key element in any evaluation of the prospects for SDI. In this regard, SDI seems to enjoy general public support, but this support tends to be shallow and uninformed and tends to weaken when confronted with policy or budgetary trade-offs. Additionally, there are two significant factors which impact on public perceptions of SDI. The first is a general perception that SDI has not made

significant technological advances since its inception despite all the rhetoric and money. This perception relates directly to the impatience of the American public and the general vision which the 'star wars' image conjures up. Thus, the actual steady technological progress of SDI has a very difficult time competing with the futuristic images held by the public. In this regard, the current emphasis on near term deployment options featuring kinetic energy weapons (KEW) such as Brilliant Pebbles could be perceived as a major retreat from the early public images of SDI featuring directed energy weapons (DEW). The fact that SDI has thus far failed to provide any type of 'show-stopper' public demonstrations no doubt contributes to the public impatience with SDI and the perception that no significant technological advances have been made. The second major factor weakening public perceptions of SDI are the generally negative media and elite judgements on SDI and strategic defenses in general. The bias of the media elite against SDI is usually subtle but its cumulative effect is unmistakable. Likewise, to the extent that political elites in this country are still enamored with the concept of MAD, deployed strategic defenses will never be a preferred policy option. While the effect of the media and elite bias against SDI may not be that significant in each individual instance, the long-term cumulative effect can be significant -- one eventually becomes soaked if forced to stand in even very light drizzle for a long period of time.

The final major factor impacting upon SDI which we will examine is perhaps the most significant: the perception of vastly

improved U.S.-Soviet relations. The rise of Mikhail Gorbachev to power in the Soviet Union and his restructuring policies of glasnost and perestroika have fundamentally altered the nature of U.S.-Soviet relations from the perspective of the American public. Public perception of the Soviets in general and of the Soviet threat in particular have undergone a radical shift since 1983 when the SDI program was begun.¹¹ Currently, the need for strategic defenses or SDI in the context of vastly improved U.S.-Soviet relations appears to be very questionable in the minds of the American public. In the present political climate what matters is not the fact of massive and still expanding Soviet strategic offensive capabilities but the perception that these capabilities are on the decline and that they are increasingly insignificant in the context of U.S.-Soviet relations. SDI must be packaged and sold in light of the 'Gorbymania' which would appear to be a major component of U.S.-Soviet relations for the foreseeable future or else it will never help to advance near-term strategic defense deployment options.

Political Strategies to Advance SDI

Having discussed the strategic rationale for near-term deployment of strategic defenses and also the political forces currently stacked against movement in this direction, we must now attempt to reconcile these two opposing forces with some specific strategies to advance near-term deployment options. In attempting to build these strategies we must keep in mind that we live in a political and not a strategic world -- a world where

decisions are made based upon the more tangible realities of international relations, domestic budgets and political trade-offs rather than upon the esoteric logic of strategy. Moreover, without at least a rudimentary level of political support, even the most technologically sweet, cost-effective, and strategically sound strategic defense system will not be advanced as a near-term deployment option. Here, then, are three specific options to enhance the political viability of SDI as a path to near-term deployment options:

1. Change and broaden public perceptions of why near-term deployments from the SDI are required. Unless the public perceives specific and logical rationales for near-term deployments, there will be no near-term deployments. Restoring a high-level of public support for SDI would seem to be the sine qua non for advancing near-term deployment options. While this requirement for popular support may be self evident, specific strategies to build popular support are less clear and self evident. The links between the rationale behind near-term deployment and public support are both subtle and broad-ranging. Development and advancement of specific strategies to enhance near-term deployment options could have a synergistic effect on popular support for SDI and should be the first area of concentration for an overall strategy to advance near-term deployment options. What are these strategies to enhance near-term deployment options?

First, the rationale behind any type of near-term deployment must be broad enough to attract support from many sectors. In

this context, it imperative to highlight all of the things a near-term deployment can do rather than focusing on just how it can thwart the effects of and lessen the threat of a Soviet first strike. An overly narrow focus on what percentage of Soviet warheads would penetrate during a massive first strike does not illustrate the other substantial potential benefits of a near-term deployment. Moreover, this focus equates our deployment with a reactive Soviet first strike in response when, in fact, any such deployment would greatly complicate any effective first strike, make such an option a far less rational choice, and reflects a MAD mindset as discussed above. The other, and perhaps equally important, strategic rationales for near-term deployments should be advanced at the same time as SDI's ability to thwart a Soviet first strike. Any near-term deployment, even if very limited, would have some effectiveness against accidental launches and while the probability of accidental launches may be small the consequences could be enormous. Politicians should be held accountable for keeping their constituents vulnerable to this threat when their actions are based on political judgements and not on any technological shortcomings. Likewise, even limited near-term deployments could have significant potential to deflect any ballistic missile attack from other countries as well as making the pursuit of this technology for threatening purposes less attractive to these other countries. Highlighting the spread of ballistic missile technology as well as the means and material to create weapons of mass destruction could increase support for strategic defenses since the public should be able to distinguish between deterrence

of rational attacks and protection from irrational threats. Finally, public support for strategic defenses could also be built by emphasizing the synergistic benefits which any near-term deployment could have for mitigating against the vulnerability problems which threaten all of our strategic forces. The public has already been sensitized to the vulnerability problems our strategic forces face by the MX deployment debates; we need to build upon these sensitivities by pointing to the potential benefits any near-term deployment could have in this area, especially if even very limited preferential defenses could be more cost effective than passive defense options alone.

Overall, the objective of the strategies outlined in the paragraph above is to move the public perception of SDI deployment rationales from a focus on the threat to a focus on the benefits. Redirecting public attention on SDI away from just the narrow Soviet first strike threat and onto all of the broader benefits is essential given the political realities of the 'Gorbymania' era. The American public will not spend billions to build something to defend them from a threat which they do not perceive to be very threatening. If SDI is sold strictly as a means of thwarting a Soviet first strike, it will not have enough political support to proceed to the stage of near-term deployments during a period when the American public perceives that U.S.-Soviet relations have improved and believes that the prospects for further improvements are excellent. Focusing on how near-term deployments can enhance U.S. interests by providing protection against accidents and irrational threats would

highlight the multilateral nature of the deterrence/defense problems the U.S. will face in the future and also the bilateral nature of MAD.

Another substantial benefit to widening the public's perceptions regarding the strategic rationales behind near-term deployments relates to public perception about MAD and nuclear war in general. Indeed, without widening the horizons concerning the rationales behind strategic defenses it is doubtful that the American public can ever be weaned away from MAD and its pernicious influence upon any ideas of strategic defenses. One of the greatest beauties of MAD is that it is so politically expedient -- once a nation accepts the logic of MAD, they are no longer required to think seriously about how to fight a nuclear war since such calculations are irrational by definition nor do they have to continually spend large sums on strategic forces since they need not procure more than second strike forces capable of delivering assured destruction upon the enemy. A politician could scarcely ask for a better political strategy because under MAD neither he or his constituents have to think about nuclear war (indeed the very repulsiveness of the subject is held to contribute to deterrence) nor is he required to spend more money on defense. Emphasis on the strategic benefits of near-term deployments in relation to accidents and threats from other countries will highlight the bilateral nature and rationality assumptions inherent in MAD and should serve to weaken this entire construct as the basis for long term multilateral stability. Moreover, this reexamination of the logic forming the basis of MAD should provide an opportunity to

highlight once again that the U.S. has chosen to attempt to implement stability on the basis of a mutual hostage relationship as the result of political choices and not on the basis of some immutable logic.

A final area in which advancing the broader strategic rationales behind near-term deployments could prove useful is linked to the relationship between public perceptions of MAD and of SDI. Far too much of the public debate and perception regarding SDI surrounds the idea of creating a 'leakproof' astrodome over the U.S. This line of reasoning is detrimental to near-term deployment options for at least two major reasons: First, such thinking reflects a MAD framework for evaluating strategic defenses; it is a framework under which strategic defenses have to be nearly perfect to have any strategic utility. This line of thinking reflects an ironic and ultimately untenable link between MAD thinking and population defense, the most popular element of SDI. Since the logic of MAD and any significant level of population defense are mutually exclusive, it is far better for supporters of strategic defense to make this fact clear at the outset rather than to have the terms of the debate set within the MAD framework for judging strategic utility of strategic defenses. A second related reason why this emphasis on an astrodome type of defense is detrimental to any near-term deployment is that it makes it very difficult to achieve these types of defenses in the real world in which the deployments would actually be made based upon political choices. This argument is well summarized by the adage that 'the best is the

enemy of the good.' It is very unlikely that a complete and robust strategic defense system will spring forth as did Athena from the head of Zeus. We may eventually be capable and willing to field a system which would constitute something approaching an astrodome, but the steps along the way will certainly have lesser capabilities and it is highly unwise for the proponents of near-term deployments to allow themselves to be held to the standard of near perfection which MAD requires and the astrodome image implies.

2. Create a powerful agency with the bureaucratic imperative to field near-term deployments. This specific strategy is fairly straightforward and does not relate specifically to the strategic rationale behind near-term deployments but focuses rather on the political realities of the bureaucratic nature of our government. The rationale behind creating a powerful agency with the primary mission of fielding near-term strategic defenses is very clear -- fielding strategic defenses would then be subject to a fundamental law of any bureaucracy. This fundamental law of bureaucracy states that the primary driving force behind any bureaucracy is to expand and defend its turf. Thus, if fielding strategic defenses were the primary mission of a powerful agency, it is likely that this option would be advanced even if there was not a large amount of public support for this. Clearly, this hypothesized situation would be very nearly the antithesis of the current bureaucratic situation in which the near-term deployment option finds itself. As described above, today there is no powerful agency with the primary mission to deploy strategic defenses. Certain elements within SDIO do favor

near-term deployments but SDIO is currently primarily concerned with continuing as an entity because it is surrounded by far more powerful bureaucratic actors many of which do not wish it to prosper. Because of the fundamental law of bureaucracy, our current bureaucracies which control the turf under which the concept of strategic defenses lies have almost no incentive to give away this turf to a new or redefined agency with strategic defense as its primary mission. Thus, there is almost no likelihood that strategic defenses will emerge as a primary mission of any agency from out of our current bureaucratic structure.

The creation of an agency with strategic defenses as its primary mission could also be imposed upon the bureaucracy. In this context, public opinion could play a crucial role in helping to create pressure on Congress and the Executive Branch for an agency with the mission and the required clout to actually advance the near-term deployment option but this outcome seems very unlikely. The public seldom wishes to create additional bureaucracies and at any rate remains to be convinced of the need for near-term deployments. Thus, while this strategy of creating an agency devoted to near-term deployments has logical appeal, it does not now seem very viable politically. Perhaps the best that can be hoped for in this area is for the broader rationales for strategic defenses discussed above to stimulate more public support for the creation of a powerful agency with the mission to deploy strategic defenses. Or perhaps those favoring near-term deployments in Congress could attach provisions favorable to the

bureaucratic position of SDI onto legislation which is more or less required such as continuing resolutions or omnibus spending resolutions.

Other more limited and incremental type of changes could be made to SDIO and might prove very beneficial to advancing the near-term deployment option. General Abrahamson recommended that the SDIO Directorship be made a four star billet in his end of tour report and this would undoubtedly provide some greater clout to the organization but probably not enough within the DoD hierarchy given the general hostility of the DoD towards deployment of strategic defenses. Another change that might prove more beneficial along these lines would be to place SDIO under more direct civilian control by making the SDIO Director an Undersecretary of Defense. Any changes which could help SDIO defend itself against the services and to take on deployment of strategic defenses as its primary mission would clearly advance the near-term deployment option.

3. Link SDI directly and specifically to improved U.S.-Soviet relations. This strategy is similar to the first strategy outlined above except that here the concern is with broadening and improving the bilateral versus the multilateral impact of SDI. The very foundations and core assumptions underlying U.S.-Soviet and all East-West relations seem to be transforming before our eyes; SDI must be packaged and sold in light of these fundamental political transformations or it may come to be seen as an antiquated irrelevancy in relation to our changing relationships. Moreover, since strategic defenses can make so many contributions to long-term strategic stability they

can and should play an important role in helping to improve superpower relations over the long-term. In this context, strategic defenses should be viewed as a technological adjunct to and an insurance policy for the opportunity to make bold political moves to radically restructure our relationship with the Soviets. As we move to dismantle the structures of the cold war, strategic defenses could help us to remove the bulk of the most deadly vestige of this ideological struggle: the huge offensive only nuclear arsenals of the superpowers.

Of course, many would argue that if the relationship between the superpowers is improving so greatly, why even bother with building strategic defenses? If our political relationship is so good, why not just drastically reduce the arsenals of the superpowers through 'traditional' arms control? These arguments are appealing and it is inherently a risky business to attempt to predict the future path of superpower relations; however, several factors mitigate against this purely political path towards greater improvements in superpower relations and highlight the role which strategic defenses could play in the evolution of our relationship with the Soviets. First, our relationship with the Soviets is in transition but has not yet been transformed. While the future currently looks very bright, almost no one is predicting an end to the long term competition between the Americans and the Soviets. We may wish to transform our rivalry into some more benign form such as economic competition but a wide-scale transformation along these lines is certainly not imminent. Meanwhile, our current efforts towards these type of

ends via 'traditional' arms control such as the current START and Defense and Space Negotiations appear to be bogged down, limited in scope, and plagued with the structural difficulties outlined above.

Perhaps it would be wise to draw an analogy between the recently concluded INF negotiations and the prospects for strategic defenses playing an enabling role in strategic arms control. Of course, a myriad of factors surround the INF Treaty and it would be extremely unwise to offer a monocausal explanation for this high drama played out for the better part of a decade; nonetheless, it does appear clear (if counterintuitive) that the emergence of the Treaty was critically dependent upon the actual deployment of INF forces by NATO. In other words, a western buildup of INF forces was critical to the eventual elimination of INF forces. Applying this analogy onto strategic defenses and strategic arms control would imply that actual deployment of strategic defenses could lead to drastic reductions in strategic forces. While this analogy is far from perfect (the absence of offense-defense interaction in relation to INF forces is one fundamental difference), it may still prove useful in illuminating the structure of current U.S.-Soviet competition as reflected in our most recent arms control treaty. Thus, specifically linking deployed strategic defenses to offensive force reductions within an arms control framework would appear to be one method of attempting to achieve substantial reductions in strategic offensive forces and is an approach which deserves careful examination and consideration. Another way to describe this approach to linking strategic arms reductions and deployment

of strategic defenses would be to say that it represents the antithesis of the MAD inspired framework of the SALT I regime.

Clearly, in attempting to advance this arms control strategy of linking strategic defenses with offensive reductions we must confront the MAD philosophy once again. Here, it is most useful to note that the proponents of MAD not only deny the possibility for movement away from the mutual hostage relationship between the superpowers which they assume to be the fundamental truth of the nuclear age but they also make this assumption into a positive virtue due to the stabilizing benefits which are assumed to flow from the mutuality of this condition. The empirical failure of this construct as embodied by SALT I to produce the theorized benefits should be incentive enough to attempt other approaches to U.S.-Soviet relations and arms control efforts. Moreover, our sanctification of the supposed virtue of the ability of both superpowers to largely incinerate the populations of the other side must rate as one of the most morally repugnant and illogical thoughts in all of human history. MAD is clearly morally repugnant as it "rests on a form of warfare universally condemned since the Dark Ages -- the mass killing of hostages."¹² Moreover, threatening to target civilians based on the MAD targeting philosophy makes the American government into de facto terrorists since we threaten civilian death on an unimaginable scale. Likewise, blind adherence to MAD is highly illogical since the impact of this philosophy on nuclear deterrence is inherently empirically untestable and is based on assumptions about the fundamental nature of the nuclear age, it fit well only

with the nuclear technology of the late 1960s, and it seems to deny the dynamic interaction between technology and strategy. Perhaps the most pernicious legacy of our continued adherence to MAD is that this philosophy will continue to have a poisonous influence on superpower relations due to its fundamental tenet of making a virtue out of possession of assured destruction capability. The time is long past to strongly question this fundamental assumption and ask ourselves whether we would prefer that the superpowers continue to maintain the ability to largely annihilate each other in the name of stability into the indefinite future or whether other approaches to superpower stability might be more benign and hopeful.

Reliance on the MAD mindset creates a self-fulfilling prophesy under which the superpowers must make every effort to continue to maintain their assured destruction capabilities in the face of political and technological changes and despite the fact they would find very little utility in an assured destruction capability outside the MAD construct. Why continue to treat a mutual assured destruction capability as a virtue when such a philosophy is clearly morally repugnant, illogical, and not a superpower goal or requirement outside the MAD construct? Indeed, it is instructive to note how close the superpowers reportedly came to moving towards almost complete nuclear disarmament at the Reykjavik Summit and while the failure of this summit to reach this goal is generally laid at the step of SDI, perhaps our failure to progress along this avenue and the great apprehension with which our allies greeted these developments is more indicative of the west's continued and unwarranted adherence

to MAD as the only basis for long-term superpower stability.

Many other specific benefits to improved superpower relations could also be realized by a mutual introduction of strategic defenses. If our devotion to maintaining a robust assured destruction capability is devalued through our reexamination of MAD and the utility of our ballistic missiles is devalued by introduction of strategic defenses then the way is opened for truly substantial and meaningful reductions in the nuclear arsenals of the superpowers. As discussed above, strategic defenses provide a type of insurance policy against the dangers of cheating at very low levels of forces and defenses could therefore serve to enable reductions to very low levels. Negotiated bilateral introduction of strategic defenses as a means of reaching very low levels of offensive forces would also serve to reduce the fears regarding and incentives for either side backsliding towards increased offensive capabilities or a return to assured destruction offensive force levels. Perhaps most importantly, negotiated bilateral introduction of strategic defenses would focus the efforts of the superpowers onto defensive technology and the type of defensive systems which are inherently less threatening than are offensive nuclear systems. The structure of the postwar world is undergoing fundamental and seemingly irreversible changes -- changes which will fundamentally alter the nature of U.S.-Soviet relations. Strategic defenses offer the superpowers tremendous potential for long-term stability and continuing improvements in our relations. Because the knives are clearly out in relation to the DoD budget,

it is now more important than ever to present politically astute rationales to advance the viability of SDI. It is hoped that this report will help to stimulate thoughts and discussions along these lines as we proceed into the rapidly changing strategic environment of the 1990s.

ENDNOTES

1. Televised Speech by President Ronald W. Reagan, 23 March 1983.
2. Ibid.
3. General Abrahamson gave the ten to twenty-five billion dollar estimate for a Phase One Strategic Defense System deployment using Brilliant Pebbles technology in his end of tour report. For estimates on the high end of the scale see, for example, Space-Based Missile Defense, A Report by the Union of Concerned Scientists (Cambridge, Mass.: Union of Concerned Scientists, 1984); or James R. Schlesinger, "Rhetoric and Realities in the Star Wars Debate," International Security, Summer 1985 (Vol. 10, No. 1).
4. See Leon Sloss and Marc Dean Millot, "U.S. Nuclear Strategy in Evolution," Strategic Review, Winter 1984 for a concise recap of the evolution of U.S. nuclear strategy.
5. For a complete description of the evolution of Reagan's "Star Wars" concept see the report by SDIO Historian Lt Col Donald R. Baucom, Origins of the Strategic Defense Initiative: Ballistic Missile Defense, 1944-1983, 24 March 1989.
6. "The Statement After U.S.-Soviet Talks," The New York Times, 25 September 1989.
7. See, for example, John Newhouse, Cold Dawn, (New York: Holt Rinehart and Winston, 1973).
8. Reagan's strong defense of SDI following the Reykjavik Summit is perhaps the best example of his willingness to defend the program at a time when political currents were moving in the opposite direction.
9. See, for example, Michael R. Gordon, "Bush plans to cut Reagan Requests for Key Weapons," The New York Times, 24 April 1989; Remarks by the Vice President to The American Defense Preparedness Association and the National Academy of Sciences, Washington, D.C., 29 June 1989; Press Briefing by Marlin Fitzwater, The White House, Office of the Press Secretary, 7 September 1989; Remarks by the President to the 71st American Legion Convention, Baltimore, MD, 7 September 1989; and James Gerstenzang, "'Star Wars' Cut Back, White House Confirms," The Los Angeles Times, 8 September 1989.
10. The FY 1990 budget for SDI will be about \$3.79 billion and this is \$279 less than was spent in FY 1989. See Michael R. Gordon, "Lawmakers agree to cut 'Star Wars' in Military Budget," The New York Times, 3 November 1989.

11. See, for example, R.W. Apple, "Poll Finds that Gorbachev's Rule Eases American Minds on Soviets," The New York Times, 16 May 1989. Or Daniel Yankelovich and Richard Smoke, "America's New Thinking," Foreign Affairs, Vol. 67, No. 1, Fall 1988.
12. Fred Charles Ikle, "Can Nuclear Deterrence Last out the Century?," Foreign Affairs, January 1973, pp. 267-285.

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